



PHR

S  
Y  
N  
O  
P  
S  
E  
S

**CRISLEY, FRANCIS D. (Public Health Service), ANGELOTTI, ROBERT, and FOTER, MILTON J.:** *Multiplication of Staphylococcus aureus in synthetic cream fillings and pies. Public Health Reports, Vol. 79, May 1964, pp. 369-376.*

Seven synthetic cream fillings were examined for their ability to support multiplication of added *Staphylococcus aureus* (enterotoxigenic strain) and their normal flora at room temperature. When prepared with water, all seven supported multiplication of the bacteria present, largely bacilli; in two staphylococci decreased in numbers markedly; in three others the staphylococci decreased slightly; and two supported significant staphylococcal multiplication during incubation for 72 hours.

Increasing the number of the staphylococci in the inoculum and neutralizing the pH of the fillings did not result in sig-

nificant staphylococcal multiplication but increased the ability of the staphylococci to survive in larger numbers in the product.

Substitution of milk for water in preparing the fillings, addition of minute amounts of whole egg and combination with pie crusts increased the ability of the fillings to support staphylococcal multiplication. Pies made with synthetic fillings rehydrated only with water supported profuse staphylococcal growth to the extent that they may be hazardous when held at room temperature before being sold.

**BREWSTER, AGNES W. (Public Health Service), ALLEN, SCOTT I., and HOLEN, ARLENE:** *Patterns of drug use by type in a prepaid medical plan. Public Health Reports, Vol 79, May 1964, pp. 403-409.*

One year's cost and utilization experience under a prepaid drug benefit covering 27,000 enrollees of a consumer-sponsored prepayment group practice plan was analyzed in terms of therapeutic purpose of the drugs prescribed. Findings were based on a sample of 515 claimants' prescriptions; valid reimbursement claims had been filed by 1,179 enrollees.

The anti-infective class of drugs was the most expensive to cover, accounting for 13 percent of the number of prescriptions and 23 percent of the total value of prescriptions. The next costliest therapeutic classes, psychotropic and hormone, contributed less than 13 percent each to the cost of the plan's operation.

Age was a prime determinant in explaining the variation in prescriptions

submitted for payment per 1,000 enrollees by class of drugs. Cardiovascular prescriptions per 1,000 enrollees increased from 0 in the youngest class to 437 in the oldest. The total rate of prescriptions per 1,000 enrollees increased more than 30 times from the youngest age class to the oldest. Generic prescribing was practiced only on a limited scale for a few classes of medication. Twelve percent of the prescriptions were prescribed generically.

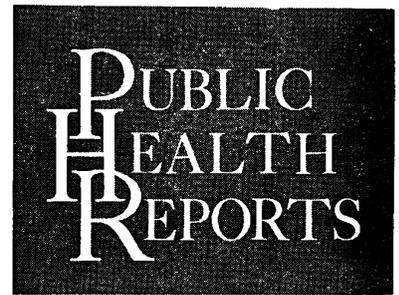
The average prescription price was \$4.21, considerably above the national average of \$3.22, reflecting in part the prescribing of more expensive drugs in larger quantities for enrollees exceeding the \$25 deductible amount.

# CONTENTS *continued*

|   | <i>Page</i> |
|---|-------------|
| Antibody response to booster dose of diphtheria and tetanus toxoids and pertussis vaccine. Thirteen years after inoculation of institutionalized subjects . . . . . | 424         |
| <i>V. K. Volk, R. Y. Gottshall, H. D. Anderson, Franklin H. Top, W. E. Bunney, and Robert E. Serfling</i>   |             |
| Outpatient mental health statistics program, 1964 . . . . .   | 435         |
| Observations on Tokyo-Yokohama asthma and air pollution in Japan . . . . .  | 439         |
| <i>Rodney R. Beard, Robert J. M. Horton, and Roy O. McCaldin</i>  |             |
| Dental health status of children 5 years after completing school care programs. Richmond, Ind., and Woonsocket, R.I. . . . .  | 445         |
| <i>Donald J. Galagan, Frank E. Law, George E. Waterman, and Grace Scholz Spitz</i>  |             |
| Effects of heat and cold . . . . .  | 455         |
| Environmental health training program, 1964-65 . . . . .  | 457         |
| Short reports and announcements:  |             |
| Baltimore's outdoor health fair . . . . .   | 376         |
| Gehrig heads Bureau of Medical Services . . . . .   | 382         |
| PHS campaign against <i>Aedes aegypti</i> . . . . .   | 391         |
| Program notes . . . . .   | 392         |
| Automatic reader and converter. Invention report . . . . .  | 402         |
| Vaccination for all U.S. children . . . . .   | 416         |
| Roadway elements and highway safety . . . . .   | 423         |
| Conference calendar . . . . .   | 444         |
| Survey of acute illnesses and injuries . . . . .  | 454         |
| Federal publications . . . . .  | 459         |

*Published concurrently with this issue:*  
 Public Health Monograph No. 72 . . . Heat and Cold effects and their control. *Douglas H. K. Lee*

*Summary and information on availability appear on page 455.*



## MANAGING DIRECTOR

J. STEWART HUNTER, M.A.  
*Assistant to the Surgeon General  
 for Information  
 Office of Information and Publications*

## BOARD OF EDITORS

- GEORGE ST. J. PERROTT  
*Chairman*
- BERNARD V. DRYER, M.D.  
 DONALD J. GALAGAN, D.D.S., M.P.H.  
 LEO J. GEHRIG, M.D.  
 JAMES HUNDLEY, M.D.  
 ROSCOE P. KANDLE, M.D., M.P.H.  
 F. ELLIS KELSEY, PH.D.  
 LUCILE P. LEONE, R.N., M.A.  
 DAVID LITTAUER, M.D.  
 MARGARET F. SHACKELFORD, M.S.  
 ELLIS D. SOX, M.D.  
 JAMES WATT, M.D., DR.P.H.
- MARCUS ROSENBLUM  
*Secretary to the Board*

## STAFF

Keith Kost, M.P.H. *Editor*  
 Winona Carson *Managing Editor*

*Address correspondence to Editor, Public Health Reports, Public Health Service, Department of Health, Education, and Welfare, Washington, D.C., 20201.*

Opinions expressed are the authors' and do not necessarily reflect the views of *Public Health Reports* or the Public Health Service. Trade names are used for identification only and do not represent an endorsement by the Public Health Service.

# U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

ANTHONY J. CELEBREZZE, *Secretary*

PUBLIC HEALTH SERVICE

LUTHER L. TERRY, *Surgeon General*

PHR

S  
Y  
N  
O  
P  
S  
E  
S

**HUNTER, ELIZABETH F. (Public Health Service), DEACON, W. E., and MEYER, PATRICIA E.: *An improved FTA test for syphilis, the absorption procedure (FTA-ABS)*. *Public Health Reports, Vol. 79, May 1964, pp. 410-412.***

An improved FTA test designated as the FTA absorption procedure (FTA-ABS) has resulted from the use of an absorption technique designed to remove nonspecific treponemal antibodies from human serum. The absorbing agent is a sonicate of Reiter treponemes which contains the common or group nonspecific treponemal antigen.

The effectiveness of the FTA-ABS procedure has been evaluated on selected serums from primary syphilis, presumed normal, biological false positive, and late syphilis categories. The results obtained are significant with respect to sensitivity (the ability to detect syphilis) and spec-

ificity (the ability to be nonreactive in the absence of syphilis). The FTA-ABS procedure detected 80.7 percent reactivity in the primary syphilis category as compared to 36.8 percent reactivity found by both the FTA-200 and TPI tests. In the late syphilis group, the FTA-ABS increased the sensitivity from a low 19.5 percent in the FTA-200 to 100 percent reactivity, while detecting 9 percent more reactivity than the TPI. The increase in sensitivity of the new procedure has been accomplished without compromising specificity as reactivity did not occur in the normal or biological false positive groups.

**GALAGAN, DONALD J. (Public Health Service), LAW, FRANK E., WATERMAN, GEORGE, and SPITZ, GRACE SCHOLZ: *Dental health status of children 5 years after completing school care programs: Richmond, Ind., and Woonsocket, R.I.*** *Public Health Reports, Vol. 79, May 1964, pp. 445-454.*

Five years after completion of school dental care programs in Richmond, Ind., and Woonsocket, R.I., participants and nonparticipants in the clinic programs in both communities were examined. Proportionately less dental care was obtained during the 5 years immediately following the termination of the projects by those children who had participated in the programs than had been obtained during the project itself. The data also show that participants and nonparticipants alike sought and received considerably more dental care during the 5 years after cessation of the project than

had children of the same age during the 5 years preceding the clinic programs.

While no cause-and-effect relationship can be demonstrated between the continuing availability of care and concentrated dental health education on changed dental health status and dental behavior, comparisons of these data with other available long-term evaluations of dental health suggest that the habit patterns established during the Richmond and Woonsocket clinic programs did carry over to a considerable degree into the succeeding 5 years.

*The nature of a paper, not its importance or significance, determines whether a synopsis is printed. See "Information for Contributors" on last page.*

## ENVIRONMENTAL HEALTH TRAINING PROGRAM, 1964-65

Listed below is the complete roster of short-term training courses offered by the Public Health Service during fiscal year 1965 through the Training Program of the Robert A. Taft Sanitary Engineering Center in Cincinnati, Ohio. The courses include training in radiological health, air pollution, water supply and pollution control, food protection, metropolitan planning, and occupational health. The courses are described fully in the FY-1965 issue of the *Training Program Bulletin of Courses*, available May 1, 1964. A copy may be obtained without charge by writing to the Director, Training Program, Robert A. Taft Sanitary Engineering Center, 4676 Columbia Parkway, Cincinnati, Ohio, 45226.

The facility or laboratory where each course is given is indicated by the following code:

DOH—Occupational Health Research and Training Facility, Cincinnati, Ohio

SEC—Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio

Rock—Radiological Health Laboratory, Rockville, Md.

Mont—Southeastern Radiological Health Laboratory, Montgomery, Ala.

Vegas—Southwestern Radiological Health Laboratory, Las Vegas, Nev.

Win—Northeastern Radiological Health Laboratory, Winchester, Mass.

ORNL—Oak Ridge National Laboratory, Oak Ridge, Tenn.

1964

July 6-17: Basic radiological health (211), Rock

July 13-24: Basic radiological health (211), SEC

July 20-31: Basic radiological health (211), Los Angeles (for pharmacists only)

July 27-Aug. 7: Occupational radiation protection (212), SEC

July 27-Aug. 14: Environmental radiation surveillance (224), SEC

Aug. 3-8: Urban planning for environmental health (601), Augusta, Ga.

Aug. 3-14: Chemical analyses for water quality (100), SEC

Aug. 10-21: Basic radiological health (211), Vegas

Aug. 17-28: Basic radiological health (211), Mont

Aug. 24-Sept. 4: Radionuclide analysis by gamma spectroscopy (208), Vegas

Sept. 9-11: Milk pasteurization controls and tests (302), SEC

Sept. 9-11: Sampling and identification of aero-allergens (405), SEC

Sept. 14-18: Management of radiation accidents (235), Austin, Tex.

Sept. 14-18: Introduction to automatic data processing systems (210) Rock

Sept. 14-25: Water quality studies (161), SEC

Sept. 14-25: Industrial hygiene engineering (501), DOH

Sept. 14-25: Industrial hygiene chemistry (502), DOH

Sept. 14-25: Analysis of radionuclides in water (206), SEC

Sept. 14-25: Basic radiological health (211), Albany, N.Y.

Sept. 21-25: Elements of air quality management (422), SEC

Sept. 21-Oct. 2: Urban planning for environmental health (600), Rochester, Minn.

Sept. 21-Oct. 2: Programing for the IBM 1620 computer (216), Rock

Sept. 28-Oct. 2: Introduction to microscopic analysis (420), SEC

Sept. 28-Oct. 2: Management of radiation accidents (235), New York

Sept. 28-Oct. 9: Radionuclide analysis by gamma spectroscopy (208), SEC

Oct. 5-9: Orientation in occupational health (509), DOH at Austin, Tex.

Oct. 5-16: Basic radiological health (211), SEC

Oct. 5-16: Plankton analysis (141), SEC

Oct. 5-16: Atmospheric survey (401), SEC

Oct. 19-23: Design of air pollutant sampling trains (421), SEC

Oct. 19-23: Microbiological examination of milk and milk products (305) SEC

Oct. 19-30: Engineering aspects of radiation surveillance (236), SEC

Oct. 19-30: Medical X-ray protection (213), Rock

Oct. 26-30: Chemical analysis of milk and milk products (304), SEC

Nov. 2-6: Urban planning for environmental health (601), SEC

Nov. 2-13: Recent developments in water microbiology (120), SEC

Nov. 9-20: Measurement of airborne radioactivity (417), SEC

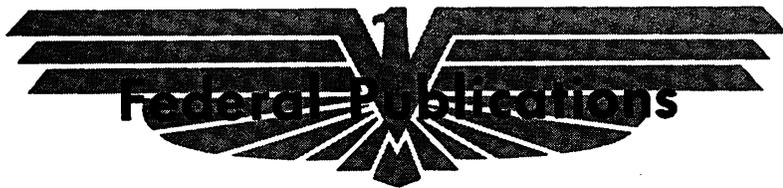
Nov. 10-12: Survey implementation program (611), Augusta, Ga.

Nov. 16-20: Medical and biological aspects of air pollution (407), SEC

Nov. 16-20: Radiation control in public health programs (209), Rock  
 Nov. 30-Dec. 11: Bio-oxidation of industrial wastes (162), SEC  
 Nov. 30-Dec. 11: Basic radiological health (211), Rock  
 Nov. 30-Dec. 11: Occupational radiation protection (212), Win  
 Nov. 30-Dec. 11: Analysis of radionuclides in foods (501), DOH  
 Nov. 30-Dec. 11: Industrial hygiene engineering (501), DOH  
 Dec. 14-18: Institutional sanitary food service (330), SEC  
 Dec. 14-18: Membrane filter techniques in water bacteriology (121), SEC

1965

Jan. 4-15: Basic radiological health (211), SEC  
 Jan. 4-15: Basic radiological health (211), Rock (for pharmacists only)  
 Jan. 11-22: Chemical analyses for water quality (100), SEC  
 Jan. 18-29: Occupational radiation protection (212), SEC  
 Jan. 18-29: Microscopic analysis of atmospheric particulates (410), SEC  
 Jan. 18-29: Medical X-ray protection (213), Rock  
 Feb. 1-5: Analysis of pesticide residues in food (311), SEC  
 Feb. 1-5: Diffusion of air pollution—theory and application (423) SEC  
 Feb. 1-5: Introduction to automatic data processing systems (210), Rock  
 Feb. 1-12: Industrial hygiene engineering (501), DOH  
 Feb. 1-19: Environmental radiation surveillance (224), SEC  
 Feb. 8-19: Recent developments in water microbiology (120), SEC  
 Feb. 8-19: Programing for the IBM 1620 computer (216), Rock  
 Feb. 8-19: Basic radiological health (211), Vegas  
 Feb. 15-19: Industrial noise (507), DOH  
 Feb. 24-26: Milk pasteurization controls and tests (302), SEC  
 Mar. 1-5: Analysis of atmospheric inorganics (409), SEC  
 Mar. 1-12: Occupational radiation protection (212), Mont  
 Mar. 1-12: Water quality management (160), SEC  
 Mar. 1-12: Engineering aspects of radiation surveillance (236), SEC  
 Mar. 8-12: Management of radiation accidents (235), Vegas  
 Mar. 8-19: Analysis of atmospheric organics (408), SEC  
 Mar. 8-19: Basic radiological health (211), Rock  
 Mar. 8-19: Urban planning for environmental health (601), Savannah, Ga.  
 Mar. 15-26: Industrial hygiene engineering (501), DOH  
 Mar. 15-26: Analysis of radionuclides in water (206), SEC  
 Mar. 22-Apr. 2: Urban planning for environmental health (600), SEC  
 Mar. 22-Apr. 2: Food microbiology (310), SEC  
 Mar. 29-Apr. 2: Heat stress—evaluation and control (505), DOH  
 Mar. 29-Apr. 9: Radionuclide analysis by gamma spectroscopy (208), SEC  
 Apr. 5-9: Radiological health for nurses (203), Rock  
 Apr. 5-14: Reactor safety and hazards evaluation (223), SEC and ORNL  
 Apr. 12-16: Bioassay and pollution ecology (143), SEC  
 Apr. 19-23: Elements of air quality management (422), SEC  
 Apr. 19-30: Urban planning for environmental health (600), Gainesville, Fla.  
 Apr. 19-30: Organic industrial wastes characterization (101), SEC  
 Apr. 26-30: Meteorological aspects of air pollution (411), SEC  
 Apr. 26-30: Radiation control in public health programs (209), Vegas  
 Apr. 26-May 7: Basic radiological health (211), SEC  
 May 3-7: Inorganic industrial wastes characterization (102), SEC  
 May 3-14: Measurement of airborne radioactivity (417), Vegas  
 May 3-14: Medical X-ray protection (213), Rock  
 May 10-14: Control of particulate emissions (413), SEC  
 May 10-21: Occupational radiation protection (212), SEC  
 May 17-21: Control of gaseous emissions (415), SEC  
 May 17-21: The electromagnetic spectrum (521), DOH  
 May 17-28: Basic radiological health (211), Win  
 May 24-28: Source sampling for atmospheric pollutants (402), SEC  
 June 6-18: Advanced training for sanitary engineer reserve officers—SEC (titles to be announced)  
 June 16-18: Survey implementation program (611), Savannah, Ga.  
 June 21-July 2: Aquatic biology for engineers (140), SEC



**Workshop on the Biology of the Prostate and Related Tissues.** *National Cancer Institute Monograph No. 12; 1963; 446 pages; \$4.* Aspects of the prostate, such as comparative morphology, factors controlling growth and function, biochemical considerations, and experimental prostatic cancers, are presented. A concluding evaluation section discusses the prevention of prostatic cancer, detection in its early stages, and possible response to hormonal therapy.

**Building for Clean Water.** *PHS Publication No. 867; 1963; revised; 9 pages; 10 cents.* Provides an illustrated progress report on Federal Incentive Grants for Municipal Waste Treatment, showing how Federal incentive grants work, how much aid is available, who may apply, the record of grants and construction 1956-63, distribution and estimated needs, and list of State approving agencies.

**Areawide Planning of Facilities for Tuberculosis Services.** *PHS Publication No. 930-B-4; December 1963; 46 pages; 40 cents.* Reports findings of a joint committee of the Public Health Service and the National Tuberculosis Association on planning facilities for tuberculosis services. In addition to presenting a picture of the current tuberculosis situation, the report discusses patterns of change, planning principles, the planning process, and the action required to implement recommendations.

**Man, Medicine, and Work. Historic events in occupational medicine.** *PHS Publication No. 1044; 1964; by Jean S. Felton, Julia P. Newman, and Donald L. Read; 52 pages; 40 cents.* Beginning with prehistoric man, this publication, developed from an exhibit, traces the growth and development of occupational medicine. It portrays man's effort to control his environment and his battles against occupational illness.

**1962 Inventory, Municipal Waste Facilities.** *PHS Publication No. 1065; nine volumes; 45 cents to \$1.25 per volume.* Each of the nine Public Health Service Regions is covered by a separate volume of from 70 to 200 pages. Grouped by States, tabulated data show for each community the sewer or sanitary district, identification of the drainage basin in which it is situated, the watercourse, name of stream into which sewage is discharged, whether sewage is treated, and pollution abatement needs.

**Public Health Service Grants and Awards, Fiscal Year 1963 Funds.** *PHS Publication No. 1079; 1964.* **Part I. Research grants.** 580 pages, \$1.50; **Part II. Training grants, traineeships, fellowships, and research career program awards.** 330 pages, \$1; **Part III. Construction of health research facilities and hospital and medical facilities,** 65 pages, 30 cents; **and Part IV. Health services formula and project grants.** 68 pages, 30 cents. Grants and awards are listed by State and institution, and by principal investigator, recipient, or responsible person. Entries include title or purpose of grant and amount. Subtotals are given for each institution and State. Summary tables are included in each volume.

**Cardiovascular Disease: 1960 data on national and State mortality experience.** *PHS Publication No. 1083; September 1963; 63 pages (22 tables); 40 cents.* Designed primarily as a reference for public health and other personnel interested in program planning and development, this booklet gives information on 1960 mortality from cardiovascular disease. The information is presented in two series of tables. The first gives national data on mortality from several major disease categories and includes numbers of deaths and death rates by color, sex, and

age. The second series reports State mortality experience for the same disease categories by color and sex. In addition, national trends for total population and white males for the years 1940, 1950, and 1960 are discussed.

**List of 1963 Awards. Research grants, research fellowships, training grants, demonstration grants.** *PHS Publication No. 1100; 1964; 41 pages.* Material is presented in sections corresponding to the four major types of grants. They are listed alphabetically by State, name of institution and individual recipient, project title, grant number, and amount of grant.

**Anesthesia for the Dental Patient With Heart Disease.** *PHS Publication No. 1106; 1963; pamphlet.* Describes local anesthesia as the method of choice for cardiac patients, lists the precautions to be taken in administration, and gives examples of satisfactory anesthetic solutions.

**Dental Surgery During Anticoagulant Therapy.** *PHS Publication No. 1107; October 1963; pamphlet.* Describes, for dentists, precautions to be taken before, during, and after surgery on patients receiving anticoagulant therapy. Emphasis is placed on the importance of complete patient histories before dental surgery.

---

This section carries announcements of new publications prepared by the Public Health Service and of selected publications prepared with Federal support.

Unless otherwise indicated, publications for which prices are quoted are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402. Orders should be accompanied by cash, check, or money order and should fully identify the publication. Public Health Service publications which do not carry price quotations, as well as single sample copies of those for which prices are shown, can be obtained without charge from the Public Inquiries Branch, Public Health Service, Washington, D.C., 20201.

The Public Health Service does not supply publications other than its own.

---

# Information for Contributors

PUBLIC HEALTH REPORTS welcomes from any source all contributions of value to public health.

Most of the readers of *Public Health Reports* are practicing public health officials. About 10 percent of the monthly circulation of *Public Health Reports* goes overseas. About half of the domestic circulation goes to Federal, State, and local government agencies concerned with health and related interests. A quarter goes to institutions accredited for teaching in health and related fields, to teachers, and to libraries. The journal also reaches research institutions, hospitals, and professional and voluntary public health organizations.

*Tearsheets.* In lieu of reprints, senior authors are provided with 50 to 100 sets of tearsheets after publication. Associate authors receive a smaller number.

*Manuscript review.* Manuscripts submitted for publication are reviewed by technical experts, and authors are given the benefit of their comments before type is set. Authors also receive edited typescripts for approval and are given the opportunity to correct galley proofs. Authors are responsible for the accuracy and validity of all material, including tables, charts, and references. Special editorial assistance in preparing or revising manuscripts is available on request, to the limit of staff resources.

Manuscripts are reviewed with the understanding that they have not been committed for publication elsewhere. Appropriate information should be provided if a paper has been given or is prepared for presentation at a meeting.

*Manuscript form.* Authors will facilitate review and publication if they submit an original and three carbon copies of their manuscripts. All copy should be typed double spaced, and each page should end with a completed paragraph. Of course, several paragraphs may appear on a typed page.

References should be given in the style used by *Public Health Reports*.

Footnotes should be worked into the text or offered as supplemental items.

Authors are expected to recognize scientific contributions by those who have assisted in their papers only if such contributions warrant mention in the text or in the paragraph identifying the authors. It is not the policy of *Public Health Reports* to publish "acknowledgments."

*Synopses.* To facilitate secondary publication, *Public Health Reports* publishes synopses of selected papers, principally research studies. Authors are requested to submit with appropriate papers a synopsis of not more than 200 words. The staff will supply on request information on preparation of synopses.

*Secondary publication.* Secondary publication of articles in *Public Health Reports* is provided in various abstracting journals. Articles are also indexed in the annual Cumulated Index Medicus (American Medical Association), the monthly Index Medicus (National Library of Medicine), the Engineering Index, the Hospital Literature Index, and the biannual supplements to the Cumulative Index to Nursing Literature.

*Bound copies.* Librarians and others should preserve their copies for binding, as the Public Health Service does not supply bound copies. Indexes are published each year in the December issue.

PUBLIC HEALTH MONOGRAPHS, edited and issued by *Public Health Reports*, must be submitted through constituent agencies of the Department of Health, Education, and Welfare.

Most Public Health Monographs are placed on sale by the Superintendent of Documents; series subscriptions are not available. Monographs are not included in subscriptions to *Public Health Reports*.

*Address correspondence on editorial matters to: Editor, Public Health Reports, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C., 20201.*